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ABSTRACT

Competencies for Articulation materials have been developed by public schools, an educational district, and a community college in Nebraska to help vocational education students progress from one level of educational training to another and to employment. Their progress is to be measured by "competencies," each of which has three parts: (1) a statement of the task: (2) the conditions and limitations that apply to performing the task: (3) the criteria for measuring successful performance of the task. The use of competencies in describing student capabilities provides reliable information to place students on the correct educational level, and provides an index of personal qualifications for employers to use to match persons with specific job requirements. This procedures manual is intended to help persons become familiar with the process for developing competencies, or to adapt already developed competencies to local situations. It explains the needs and purposes of the project, procedures, development of a student outcome section, verification of competencies, and recommended adoption procedures. Components in the Competencies for Articulation series include competency lists and materials for drafting, electronics, health occupations, office occupations, carpentry, welding, and auto mechanics--see note. (KC)

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# COMPETENCIES FOR ARTICULATION

# PROCEDURES MANUAL

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 026 991

An Exemplary Project in Vocational Education
Performed Pursuant to a Grant From The
NEBRASKA STATE BOARD FOR VOCATIONAL EDUCATION
Under the Provisions of Part D
of the Vocational Education Act of 1968

**A Project of the**
**Lincoln Public Schools**
**Educational Service Unit No. 6**
**Southeast Community College**

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## INTRODUCTION

Competencies for Articulation materials have been developed by personnel from four educational agencies — Lincoln Public Schools, Educational Service Unit No. 6 at Milford, Boys Town at Omaha, and the Lincoln and Milford campuses of Southeast Community College.

The information is intended to help interested persons become familiar with the process for developing competencies. It may be helpful to those who wish to adapt already developed competencies to local situations. These existing competencies have been developed by people in education, business and industry.

The first part of the Manual, pages 1 through 16, provides information helpful to those who wish to develop competencies in other areas of Vocational Education. The second section, pages 17 through 20, contains information helpful to educational personnel in adapting competency materials already developed to their own situation.

**Need for Project:**

Each year the Nebraska Advisory Council for Vocational and Technical Education publishes a report entitled "Getting it All Together."

This report contains recommendations for future consideration and is presented to the State Board for Vocational Education. Coordination and articulation among secondary, post-secondary and adult education agencies is referenced in the 1971 report. The report contained the following statement:

> THE COUNCIL FOUND NEED FOR MORE ARTICULATION BETWEEN SECONDARY PROGRAMS AND POSTSECONDARY AND ADULT EDUCATION AGENCIES. THE FORMAT FOR COORDINATION OF THESE AGENCIES HAS BEEN ESTABLISHED AND FUNCTIONING IN SOME INSTANCES. CERTAINLY, WITH THE PASSAGE OF L.B. 759[1] THERE SHOULD BE IMPROVED COORDINATION OF THE LEVELS OF VOCATIONAL EDUCATION WITHIN THE STATE.

Priorities in the 1973 report by the Council included articulation and communication. The report suggested "there is a need to strengthen further the joint forces of secondary and post-secondary vocational education." "In planning for the future, there is much to be gained in educational quality by a close articulation of all levels of vocational education."

The Council's report in 1974 contained the following recommendation:

> THERE SHOULD BE A CONTINUAL CONCERN ON THE PART OF BOTH THE SECONDARY AND POSTSECONDARY PROGRAMS TO AVOID OVERLAPPING OR DUPLICATION OF INSTRUCTION. THIS CAN BEST BE DONE IF ALL EDUCATIONAL AGENCIES INVOLVED ADHERE TO THEIR LEVEL OF RESPONSIBILITY AND MAINTAIN CLOSE ARTICULATION OF THE INSTRUCTORS INVOLVED.
>
> a. POSTSECONDARY COLLEGES SHOULD MAKE ALLOWANCES FOR STUDENTS WHO HAVE HAD VOCATIONAL EDUCATION DURING THEIR SECONDARY PREPARATION.
> b. POSTSECONDARY COLLEGES SHOULD MAKE ALLOWANCES FOR STUDENTS WHO HAVE NOT MADE DEFINITE OCCUPATIONAL DECISIONS.
> c. INSTRUCTORS OF BOTH SECONDARY AND POSTSECONDARY VOCATIONAL PROGRAMS SHOULD HAVE A DEFINITE UNDERSTANDING OF THE INSTRUCTIONAL UNITS OFFERED AT BOTH LEVELS.
> d. IF A REVISION OF INSTRUCTIONAL OFFERING IS NEEDED AT EITHER THE SECONDARY OR POSTSECONDARY LEVELS, THERE SHOULD BE A MEETING BETWEEN THE INSTRUCTORS INVOLVED TO ASSURE THAT THE PROPOSED REVISION DOES NOT BRING ABOUT AN OVERLAPPING OF INSTRUCTION ALREADY BEING OFFERED.

In 1975, relevance and competencies were recommended:

> "RELATING THE BASIC EDUCATIONAL FUNCTIONS WITH THOSE COMPETENCIES NEEDED TO OBTAIN EMPLOYMENT AND ADVANCEMENT ON THE JOB WILL INJECT RELEVANCE INTO THE EDUCATIONAL CURRICULUM."

Exemplary funds were made available in Nebraska to three educational agencies to promote the development of competency materials. Personnel from the Lincoln Public Schools, Educational Service Unit #6 at Milford, and the Lincoln and Milford campuses of the Southeast Community College worked together to provide materials, policies, and procedures to help students receive more appropriate placement in employment and in additional education and training.

**Purpose of Project:**

The project was designed to be a model. All schools providing vocational education need be involved in the development of materials and procedures for helping students progress from one level of educational training to another and to employment.

And, competencies for articulation need be developed for all areas of vocational education and training, not just for those that have been a part of this particular project.

It is the intent of those involved in the project to have provided materials and information that will encourage others to become involved in the process — one helpful to teachers, administrators, employers, community resource persons, taxpayers, and especially students.

The project models how personnel from secondary and post-secondary educational agencies became involved in competency development and it also models competency development and supporting materials that may be accomplished in all areas of vocational instruction.

**Definitions:**

The term competency may mean different things to different people. A **competency,** in this project, describes what it is a student is able to do based on knowledges, attitudes and skills attained through education and experience. Each competency has three components or parts:

1. a statement of the task.

2. the conditions and limitations that apply to performing the task.

3. the criteria for measuring successful performance of the task.

Descriptions of tasks, conditions and limitations and the criteria for determining whether one is competent to accept initial employment in each of the areas were developed with the assistance of people in business and industry — employees, employers and personnel in human services.

No reference is made in the project as to which competencies or the number of competencies a student must develop in order to receive credit for a particular high school course or program. It is important to note that project competencies developed with the help of people in business and industry describe skills necessary for initial employment. Competencies were not developed reviewing what is or is not a part of course or program content in either high school or post-secondary training.

Students must meet all criteria described in the competency in order to be considered competent. Students either pass or fail in their attempt to perform each task.

**Articulation,** in this project, first of all suggests that students may move from one level of education to another and from one educational agency to another. As they move, it becomes important to recognize and assess student capabilities in order to better place them at educational levels that are both meaningful and challenging. The use of competencies in describing student capabilities provides reliable information to place those requesting additional education and training. Articulation also means that students may move from an educational experience to employment. Records of competencies achieved by students may be used by employers to match personal qualifications to specific job tasks and requirements.

**Audiences:**

Project materials may be appropriately used by the following groups:

1. Students

   Opportunities for employment within the vocational curriculum area are listed along with specific competencies that help one to prepare for initial employment.

   Students may plan educational programs and experiences that contribute to the development of suggested competencies.

   Students may be eligible, also, for high school advanced credit and placement.

   Students may also determine whether advanced placement opportunities are available for post-secondary education and training.

2. Teachers

   Courses and programs may be planned and developed using job opportunity and competency information.

   Enabling tasks for each competency may be used in planning lessons and activities and for checking the progress of students.

   Student records contribute to accurately describing what it is students can do. Student and class records are available for recording class progress and individual accomplishments.

3. Administrators

   Courses and programs may be planned and developed using job opportunities, advanced placement and competency materials.

   School programs may be available to prepare students for specific job opportunities. Competency materials provide detailed information about such things as facilities, equipment, and instructional materials that must be provided if students are to be able to develop competence.

   Materials may be used to determine if present instructors and those being considered for employment are qualified to teach in a particular program.

4. Counselors

   Job opportunity information and competency development materials may be used by counselors in providing career, course and program information to students. Students may plan educational programs based on this information.

   Advanced placement information may be used in counseling students about additional education and training.

   Employment opportunities are also described.

5. Employer

   Individual student records may be helpful to employers in matching acquired skills to job tasks and responsibilities. Records will show what it is students can do because of education and training.

6. Post-secondary Registrar

   Individual student records may be helpful to personnel involved in registering students at the post-secondary level. Because records will contain information about what it is students have achieved, advanced placement may be provided that is meaningful and challenging.

**Organization of Committees:**

Representatives must be identified to serve on a committee to organize the project. Responsibilities of this project committee include determining:

1. Areas of instruction to be developed.
2. Work committee representatives to be responsible for competency development and for placement policies and procedures for each area identified.
3. Timelines for the project.
4. Periodic progress review.

This project committee, generally comprised of administrators, should include representatives from secondary and post-secondary schools and, if possible, be reqresented by State Department of Vocational Education personnel, also.

Project committee members must identify work committee members and extend invitations for these people to serve.

Criteria for the selection of work committee members includes:

1. Availability to project director and to project assignments.
2. Expertise in curriculum area.
3. Experience in teaching in the area.
4. Leadership skills.
5. Recognized as a leader in the curriculum area.
6. Writing skil's.
7. Knowledge of employment requirements.
8. Ability to work with resource persons from business and industry.
9. Organizational abilities.
10. Representation from secondary and post-secondary educational agencies.

Work committees should not exceed six persons in each curriculum area. A chairperson needs to be selected for each group and arrangements need be expressed about such items as salary, mileage allocations, and meeting dates and places. Chairperson responsibilities include determining meeting work dates, member responsibilities, conducting work sessions and providing minutes of each meeting.

The project must be clearly explained to prospective work committee members at an orientation meeting. This explanation includes:

1. background of project
2. purpose
3. overview of content
4. expected outcomes

5. individual and committee responsibilities

6. timelines

7. reimbursement

Members of the project committee must conduct the initial meeting for work committee members.

**Committee Responsibilities:**

It is extremely important for project and work committee members to deal with the following responsibilities and issues as the project progresses:

1. Become knowledgeable about education and training at all levels of instruction, as well as level committee member represents.

2. Develop competencies for skills necessary for initial employment rather than for what has been traditionally taught in one course or another.

3. Understand that competencies deal with what to do using knowledge learned. Competencies are based on job tasks that require skill development.

4. Students may become competent because of education, training, and experiences at different levels. Where the student received training is not as important as the fact that the student has become competent. Staff members and institutions at different levels must deal with an "articulated curriculum" — one that recognizes what it is students can already do as placement for additional educational experiences is considered.

5. Implement the use of competency records for describing what it is students can do as a result of education and training.

6. Encourage post-secondary registrars and employers to place competent students appropriately.

7. Provide information and in-service activities to community resource persons to promote awareness and understanding of competency materials and to encourage the use of such information.

8. Develop confidence and understanding about what other staff members and institutions are doing in providing instruction for students.

9. Know that it may become necessary to make appropriate changes in one's program because of the development of competency materials and the need to promote articulation opportunities for students.

10. Involve resource persons from business and industry in the development of competency materials.

11. Believe in the worth of the project in order to endure the bad with the good as the project progresses.

**Procedures:**

Once work committee members have been selected and have agreed to be involved in the project, it is important to develop a schedule of meeting dates, places, times, and objectives. Frequent meetings are important as the project begins, for there is much information and discussion unique to the project. This information includes such things as the components or parts of a competency, competency language, and to become familiar with task lists.

Discussion at meetings must deal with the following:

1. Defining competency (describing what it is students can do because of education and training) and articulation (describing how to help students move from school to employment and/or one level of education and training to another).

2. Identifying research studies and projects that contain job description tasks.

3. Reviewing task analysis information to determine what may apply to employment needs in the community.

4. Developing competency statements to promote understanding of competency components, language, and the format to be used in all competencies. Review those developed in auto mechanics, carpentry, drafting, electronics, health occupations, office, and welding occupations as examples of what has been written.

It may be helpful to some to develop the competency using the following approach:

1. Identify facility, equipment and supplies necessary to complete a task.

   TASK: Demonstrate skill in cleaning hard surface

   Vinyl or terazzo floor

   24-ounce cotton mop
   5-gallon bucket and wringer
   red pad
   spray buff material
   3 gallons clean water
   buffer at least 17 inches
   24-inch dust mop
   "Wet Floor" sign

2. Describe what it is the student must do with the facility, equipment, and supplies identified in number one.

   Scrub and buff vinyl or terazzo floor

3. Using examples provided in other vocational curriculum areas, develop the conditions and limitations statement.

   Given a buffer of at least 17 inches, a 24-ounce cotton mop, a 5-gallon bucket, a wringer to fit a 5-gallon bucket and 24-ounce cotton mop, a red pad, a 24-inch dust mop, spray buff material, 3 gallons of clean water, a vinyl or terrazzo floor, and a "Wet Floor" sign, the student will scrub and buff a vinyl or terrazzo floor.

4. Determine how one will measure or evaluate whether a student can perform the task. Use language that is **measurable**. Terms like "will show" or "will perform satisfactorily" are not acceptable.

   CRITERIA OF ACCEPTABLE PERFORMANCE:
   1) "Wet Floor" sign posted.
   2) Floor dusted with dust mop and free of lint, dust and debris.
   3) Floor scrubbed and free of soil and streaks.
   5) Floor buffed to even shine, scuffs removed and with no swirl marks.

5. Enabling tasks may be developed using task analysis information. These tasks, when performed successfully, contribute to the completion of the competency.

ENABLING TASKS:

1) Prepare solutions according to manufacturer's directions.
2) Dust, scrub, and buff floor.
3) Inspect work.
4) Assemble, disassemble, operate, and care for equipment.
5) Wash hands before and after task.

6. Glossary terms may be identified as competencies are developed. Important words subject to different interpretations should be defined in this section. Mailable copy, for instance, may mean different things to different people.

GLOSSARY:

scrub — entire surface covered with mop wet with clean water

7. Specific tests, or those as examples, may be appropriate for some vocational areas of instruction or for some competencies.

8. Student records, similar to those already developed, need to be included in materials.

STUDENT RECORD:

| Competency | Task | Date Completed | Instructor |
|---|---|---|---|
| 46 | cleaning hard surface floor | | |

**Development of Student Outcomes Section:**

1. Job Opportunities

Initial employment opportunities available in the community are to be described by job title. The availability of these jobs must be confirmed by seeking information from such sources as employment agencies, directors of human services and newspapers.

Competencies necessary for satisfactorily performing jobs must also be identified with the assistance of resource persons from business and industry. **Dictionary of Occupational Titles** and **Office of Education** code numbers provide reference descriptions for reporting. They are used here to encourage educators to continue to include code numbers as job titles are referenced.

It is important in developing this information to consider including additional information helpful to students and teachers in planning educational programs and experiences. Some job opportunities listed require additional education and training. They may also require certification. Again, resource persons in business and industry may be helpful in providing this information.

## JOB OPPORTUNITIES

Many office occupation positions available in the Lincoln community and in surrounding areas are listed along with the Dictionary of Occupational Titles and the Office of Education codes.

Recommended competencies to be developed by students for initial employment are given. Students may use this information to plan and prepare school experiences properly.

| Dictionary of Occupational Titles Code Number | Office of Education Code Classification | Occupational Title | Competencies Necessary for Initial Employment |
|---|---|---|---|
| 201.368 | 14.0702 | Secretary | 1 through 16 |
| 202.288 | 14.0703 | Stenographer | 1 through 16 |
| 203.588 | 14.0902 | Typist | 1-5, 7, 11D, 15, 16 |
| 204.288 | 14.0402 | Correspondence Clerk | 1, 2, 8, 10, 11A, 12, 15, 16 |
| 205.368 | 14.0603 | Personnel Clerk | 1-4, 9, 10, 11A, B, G, 12B, 15, 16 |
| 206.388 | 14.0302 | File Clerk | 1, 3, 4, 5D, 10, 11A, 15, 16 |
| 207.782 | 14.0301 | Duplicating machine operator | 5, 7, 11E, 15, 16 |
| 208.588 | 14.0901 | Transcribing machine operator | 1, 2, 6, 7, 11D, 15, 16, |
| 209.388 | 14.0901 | Clerk typist | 1-4, 8, 9, 10, 11, 12, 13, 15, 16 |
| 210.388 | 14.0102 | Bookkeeper | 3, 4, 9, 15, 16 |
| 211.368 | 14.0103 | Cashier | 1, 3, 4, 9, 15, 16 |
| 212.368 | 14.0105 | Teller | 3, 4, 5D, 9, 15, 16 |
| 216.488 | 14.0104 | Calculating machine operator | 3, 4, 15, 16 |
| 219.388 | 14.0303 | Administrative clerk | 1-6, 8-16 |
| 222.387 | 14.0503 | Shipping and receiving clerk | 3, 4, 9, 10, 11C, 11I, 15, 16 |
| 231.588 | 14.0403 | Mail Clerk | 8, 11B, 15, 16 |
| 237.368 | 14.0406 | Receptionist and Information clerk | 1, 8, 11A, B, F, G, H, 1, 12, 15, 16 |

SAMPLE

2. Advanced Placement Statement

Since articulation to advanced education and training is one of the primary uses of competencies, members of the project committee and members of the work committee should pursue the possible development of policy statements to describe how students may receive advanced placement standing, with representatives of post-secondary area schools.

## ADVANCED PLACEMENT POLICY STATEMENT

Southeast Community College
Lincoln and Milford Campuses

The College believes that students should be recognized and rewarded for previous educational and occupational experience when that experience results in competence in areas normally addressed by the courses and programs of the College. Advanced standing may be awarded with full credit, up to limits established by each department of the College but not exceeding 30 credit hours. Credits earned in other accredited educational institutions in excess of 30 hours may be accepted by the department.

The College has established the following methods to enable students to gain advanced standing.

### CREDIT BY EXAMINATION

Some courses have been identified which may be completed by examination. Testing devices and evaluation procedures will vary according to the course, departmental requirements and the amount of credit being advanced.

To apply for credit by examination, the applicant must have been accepted for admission to the College and have established a transcript. Applications for Credit by Waiver or Examination must be submitted to the department from which credit would be granted.

Applicants for credit by examination must pay the following: 50% of the current per credit hour fee for each credit hour attempted by examination. This fee must be paid prior to the examination.

A "Credit Examination Notice" will be forwarded to the Campus Registrar for all credit granted by examination. The Registrar will record all credit granted as "Px" (Passed by Examination) on the transcript. No honor points will be awarded and the credit by examination will not be included in the cumulative grade point average (CGPA).

### CREDIT BY WAIVER

Some courses and series of courses have been identified which may be waived in meeting program graduation requirements.

Students requesting advanced standing Credit by Waiver must: Complete an Application for Credit by Waiver or Examination and submit the applincation for evaluation to the department granting the waiver.

Upon completion of the evaluation, submit the application and evaluation to the Campus Registrar for recording on their transcript.

The following entry will be made on the student's transcript for all course credit granted by waiver: "The following program requirements were waived by substituting previous education and/or occupational experince. (list courses waived.) This waiver of program requirements was granted this date _____ by _____ (evaluator and is in accordance with Department, Campus and Area policies, rules and regulations."

No fee will be charged for advanced credit by waiver.

Credit by Waiver will not be included in calculating student's grade point average (CGPA).

Credit granted by waiver is subject to evaluation by other departments, programs and other institutions and probably would not be accepted as transfer credit by them.

Credit granted by waiver will be contingent upon satisfactory completion of advanced courses.

3. College Credit

Post-secondary school officials should provide specific courses information — title, number, units of credit — that may be applied to advanced placement standing.

## ADVANCED PLACEMENT

Southeast Community College
Lincoln Campus

Advanced placement in the Secretarial/Clerical Program of the Lincoln Campus of Southeast Community College will be determined on the basis of competencies which the prospective student demonstrates according to the following:

| Students Demonstrating Competency No. | Will Receive SCC Credit In the Amount of | For SCC Course No. | Course Title |
|---|---|---|---|
| 1 | 3 | 3070 | Typewriting 1 |
| 1 & 2 | 3 | 3071 | Typewriting 2 |
| 3 & 4 | 1 | 3091 | Business Machines (10 key) |
| 5A, B, C, D | 1 | 3006 | Duplicating |
| 6 | 3 | 3020 | Word Processing 1 |
| 7 | 1 | 3099 | Magnetic Card Selectric Typewriter |
| 2, 4, 8, 9, 10, 11, 12, 15, 16 | 3 | 3033 | Office Procedures |
| 10 | 3 | 3007 | Filing |
| 13 | 5 | 3050 | Shorthand 1 (Gregg) |
| | 3 | 3055 | ABC Stenoscript (any other form of speedwriting) |
| | 3 | 3051 | Shorthand 2 (any shorthand system) |
| 13 & 14 | 3 | 3052 | Shorthand 3 (any shorthand system) |

The program supervisor of the Secretarial/Clerical Program has the responsibility for conducting and evaluating examinations to determine the competency level of students requesting consideration under this agreement.

Examinations used for evaluation purposes will be updated from time to time although every effort will be made to maintain their consistency with the competencies identified in this agreement.

This agreement cannot, however, be considered a contract between Southeast Community College-Lincoln Campus and any prospective student. The Board of Governors of the College reserves the right to make changes in courses required, courses offered, credits waived, credits granted, and in any other matter it deems necessary without revision of this agreement and without notice. Prospective students wishing consideration under this agreement should contact the program supervisor in order to establish and maintain a close working relationship between the College, its program, and the student.

SAMPLE

4. High School Credit

Secondary schools should be encouraged to assign units of credit, where possible, to each of the competencies. (This approach to awarding credit would be especially necessary for schools that provide complete flexibility in permitting students to develop only those competencies that apply to specific job titles.)

If it is not possible to specify credit by competency, school officials should be encouraged to show course offerings and credit in quarter or semester units, as they relate to competencies.

## HIGH SCHOOL CREDIT

High school credits are suggested for each competency. It is the responsibility of each educational agency to determine the level of competency and the amount of credit to be awarded.

| Competency | Semester Credit Hours | Competency | Semester Credit Hours |
|---|---|---|---|
| 1 | 5 | 10A | ½ |
| | | 10B | ½ |
| 2A | 3 | 10C | ½ |
| 2B | 3 | 10D | ½ |
| 2C | 3 | | |
| 2D | 3 | 11A | ½ |
| 2E | 3 | 11B | ¼ |
| | | 11C | ¼ |
| 3 | 1 | 11D | ¼ |
| | | 11E | ¼ |
| 4 | 1 | 11F | ¼ |
| | | 11G | ¼ |
| 5A | ¼ | 11H | ½ |
| 5B | ½ | 11I | ¼ |
| 5C | ¼ | | |
| 5D | ¼ | 12 | 1 |
| 6 | 2½ | 13 | 10 |
| 7 | 1 | 14 | 10 |
| 8 | 1 | 15 | ½ |
| 9A | 1 | 16 | 1 |
| 9B | 2 | | |
| 9C | 2 | | |

SAMPLE

5. Enabling Tasks

Task analysis studies generally list hundreds of tasks unique or specific to employment opportunities. Because some tasks may be considered more important than others and because the number of tasks classroom teachers should be expected to monitor must be reasonable, an effort should be made to keep the number of competencies reasonable.

Tasks not included in the competency statement but that contribute to the completion of the task should be identified as enabling tasks. In this manner, competencies may be kept to a workable, manageable number and still provide a complete list of tasks important to the accomplishment of the competency statement.

**ENABLING TASKS**

**COMPETENCY NO. 2 — TO TYPE PRODUCTION MATERIALS FOR THE OFFICE**

Operate typewriter (manual or electric)
Compose and type a title page
Proofread typewritten copy
Type addresses on envelopes and/or cards
Correct carbon copies
Correct original copies
Type manuscripts and/or reports (formal and informal) containing footnotes
Compose and type interoffice memorandums
Type preprinted forms including invoice, purchase order, credit memo, check, mailing label and telephone message
Type carbon copies
Type and/or rule tabular material (tables, columns, rows of figures)
Compose and/or type letters that may contain attention line, mailing notation, and enclosure notation
Type statistical material
Type from unarranged copy
Type correspondence, memos, and reports from rough drafts
Type final copy from rough-draft copy
Use reference materials
Type from handwritten copy
Use addition
Use subtraction
Use multiplication
Use decimals

SAMPLE

6. Glossary

Important terms subject to different interpretations used in competency statements need be defined. Mailable copy in office occupations, for instance, may mean different things to different people. A definition should be provided to eliminate any chance of misunderstanding as it applies to a competency statement.

## GLOSSARY

**Mailable Copy***

1. Specific directions will be followed. The placement of the material is attractively centered horizontally and vertically on the paper if appropriate.
2. The form or style corresponds to the source document.
3. All words are spelled correctly and all figures are typed accurately.
4. Words are divided according to word division rules in *Twenty Thousand Words-Word Division Manual,* a reference which contains the rules of word division.
5. Grammar and punctuation are correct.
6. The copy is free of additions, omissions, or transpositions which change the intended meaning.
7. Corrections and realignments have been made neatly so there are no visible traces of the incorrect or misplaced letter or letters. (Carbon copies do not need to be corrected.)
8. There are no visible strikeovers.
9. There are no indistinct letters; the print is uniformly dark enough for easy reading.
10. The copy is free of streaks, blots, smudges, fingerprints, wrinkles, machine images, or other distracting marks.
11. The size, finish, and quality of the paper, master, or stencil are appropriate to the task.
12. Student composed material will contain all necessary information.

*Adapted with permission from *Typing: Student Learning Plan,* c 1976 by the Dallas Independent School District, Dallas, Texas, Harper and Row, Publishers.

SAMPLE

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## 7. Student Records

Students should be provided a transcript indicating what it is they can do because of education and training. Committee members need design such a form for recording individual student accomplishments as well as to design one for recording the progress of all students.

**AUTO MECHANICS**

_____
Name of Student

School Stamp

This is to certify that the above named student has demonstrated proficiency in the following tasks:

| Comp | Task | Date Completed | Instructor |
|---|---|---|---|
| 1 | Analyze & service engine | | |
| | A. Block & crankshaft | | |
| | B. Piston & cylinder | | |
| | C. Valve Train | | |
| | D. Cylinder Head | | |
| 2 | Analyze & service engine lube system | | |
| | A. Oil pump | | |
| | B. Oil filters | | |
| | C. Oil galleries & passages | | |
| | D. Oil pressure indicator | | |
| | E. Oil coolers | | |
| 3 | Analyze & service electrical system | | |
| | A. Ignition system - conventional | | |
| | B. Ignition system - electronic | | |
| | C. Cranking system | | |
| | D. Charging system | | |
| | E. Lighting | | |
| | F. Accessories | | |
| 4 | Analyze & service fuel system | | |
| | A. Fuel supply system | | |
| | B. Carburetor system | | |
| | C. Air cleaner system | | |
| | D. Emission control system | | |
| | E. Induction system | | |
| 5 | Analyze & service accessory system | | |
| | A. Heater system | | |
| | B. Air conditioning system | | |
| | C. Power seat system | | |
| | D. Cruise control system | | |
| | E. Power window system | | |
| 6 | Analyze & service cooling system | | |
| | A. Water pump | | |
| | B. Radiator | | |
| | C. Radiator cap | | |
| | D. Fan | | |
| | E. Coolant | | |
| | F. Connecting Hoses | | |
| | G. Temperature indicators | | |
| | H. Thermostat | | |

| Comp | Task | Date Completed | Instructor |
|---|---|---|---|
| 7 | Analyze and service suspension system | | |
| | A. Front end suspension system | | |
| | B. Rear suspension system | | |
| | C. Steering system - manual | | |
| | D. Steering system - power | | |
| | E. Front wheel alignment | | |
| 8 | Analyze & service power train | | |
| | A. Friction clutch & throw-out bearing | | |
| | B. 3 & 4 speed standard transmissions | | |
| | C. Drive shaft & universal joints | | |
| | D. Differential | | |
| | E. Rear axle shaft & housing | | |
| | F. Overdrive system | | |
| | G. Automatic transmissions | | |
| 9 | Analyze & service brake system | | |
| | A. Drum brake system | | |
| | B. Disc brake system | | |
| | C. Power brake system | | |
| 10 | Analyze and service exhaust system | | |
| 11 | Perform maintenance operations | | |
| | A. Service exhaust system | | |
| | B. Oil & filter change | | |
| | C. Lubricate chassis | | |
| | D. Test coolant | | |
| | E. Service cooling system | | |
| | F. Pack & adjust front wheel bearings | | |
| | G. Replace windshield wiper blade | | |
| | H. Tire maintenance | | |
| | I. Battery inspection, maintenance & testing | | |
| | J. Check automatic transmission fluid | | |
| | K. Change automatic transmission fluid | | |
| | L. Inspect, change, adjust V-belts | | |
| | M. Check, correct diff. & stand. trans. grease lvl. | | |
| | N. Align headlights | | |
| | O. Service station island | | |

_____
Student signature

_____
School Official Signature

SAMPLE

**AUTO MECHANICS**

**STUDENT RECORD CLASS ROSTER**

| | Front end suspension system | Rear suspension system | Steering system - manual | Steering system - power | Front wheel alignment | Friction clutch & throw-out bearing | 3 & 4 speed standard transmissions | Drive shaft & universal joints | Differential | Rear axle shaft & housing | Overdrive system | Automatic transmissions | Drum brake system | Disc brake system | Power brake system | Analyze and service exhaust system | Service exhaust system | Oil & filter change | Lubricate chassis | Test coolant | Service cooling system | Pack & adjust front wheel bearings | Replace windshield wiper blade | Tire maintenance | Battery inspection, maintenance & testing | Check automatic transmission fluid | Change automatic transmission fluid | Inspect, change, adjust V-belts | Check, correct diff. & stand. trans. grease lvl. | Align headlights | Service station island |
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SAMPLE

**Verification of Competency Materials:**

It is important to make use of all available resources as materials are being developed. These resources include the literature, research, and representatives from business and industry and from educational agencies.

It is also important to plan for other representatives from education and from business and industry to review the materials developed. Work sessions should be scheduled in order that all materials may be reviewed/studied by community persons who have not served as project committee members. Modifications in materials should then be made based on these reviews and study.

**Dissemination of Information:**

Committee members have responsibility for describing the product of the project — competencies — with as many individuals and groups of people as possible. People in education and people in business and industry need to know about the materials in order that they may be applied both to employment and to advanced education and training.

Students, parents, school administrators, teachers, employers and employees should be encouraged to become familiar with competencies for articulation being developed in vocational education curriculum areas.

Members of project committees, project directors, and personnel from the State Department of Vocational Education are available to serve as resource persons for helping disseminate project materials and information.

**Work Committee Outcomes:**

Meetings, involving representatives from secondary and post-secondary agencies and from business and industry, result in participants attitudinal change and materials development.

1. Members will communicate about programs. They will become more familiar with programs in other educational agencies and at different levels of education.

2. Members will become more confident not only in what they themselves provide in instructional programs for students but also what others provide.

3. Members will become even more student centered as they develop materials and policies that (1) help students plan educational experiences that contribute to becoming competent, (2) help students secure employment, and (3) help students receive advanced placement as they pursue additional education and training.

4. Members will develop skill in writing competencies that describe what it is that is required for employment by people in business and industry rather than competencies based on what is being taught in classrooms.

5. Members will continue to strengthen their communications with representatives of business and industry in order to provide meaningful educational experiences for employable students.

6. Members will develop student and class records that better describe what it is students can do.

7. Members will establish ways to communicate program benefits and student accomplishments to administrators, counselors, other staff members, parents, community people, and students.

8. Members will commit themselves to making changes in existing programs based on the products of the study.

9. Members will learn to express themselves in competency language — language easily understood by others and language that can be measured objectively.

These changes, and others, will take place individually — and at different times — within the membership of committees. Each scheduled meeting will provide opportunity for these changes to take place.

The personal satisfaction and the professional growth opportunities are great for all who become involved in the project and with the project.

## RECOMMENDED ADOPTION PROCEDURES

Any individual or institution interested in using these materials should contact State Department of Vocational Education and/or Research Coordinating Unit personnel. These agencies will be able to provide you with:

1. Information concerning the project

    a. demonstration sites
    b. available consultant resources
    c. evaluations
    d. scope of available areas
    e. other interested agencies in the area

2. Materials

    a. Nebraska competencies for articulation booklets
    b. test manuals
    c. area post-high school advanced placement policies

3. Sources for assistance

    a. consultation
    b. possible funding sources

If after consulting with the above-mentioned resource persons there is interest in participating, the next step would be to invite area high school and post-high school administrators and representatives from business and industry to meet to consider forming a consortium. This group would need to:

1. Become informed about the project

2. Decide whether or not to participate

    a. may need time to consult with home institution
    b. participation of all agencies not required

3. If #2 is affirmative, select one of the agencies as a sponsoring agency

The sponsoring agency could be a community college, baccalaureate college, high school, or service unit. The initial responsibilities of the sponsoring agency are:

1. Identify a facilitator

    a. add-on to existing job description
    b. new position
        (1) full time
        (2) part time

2. Determine needs and costs for:

   a. staff development
   b. salaries
      (1) facilitator and support staff
      (2) part-time workshop stipends
   c. printing and miscellaneous

3. Identify funding sources

   a. government or private grants
   b. district assessments
   c. local funds

4. Identify participants

The steps described above do not necessarily need to happen in a particular order or sequence. For example, participants may need to be identified before financial support can be determined. The type of funding may determine the type of position for the facilitator.

Committee Criteria:

The facilitator will form subject matter (i.e.: welding, health, office) committees. These committees should be made up of:

1. At least one representative from each of the participating educational institutions

2. Comparable representation from business and industry

These subject matter committees will need to:

1. Review existing material

2. Revise student outcome section

   a. post-high school develops credit statement

   b. high school develops credit statements

   c. business and industry identifies jobs available and competencies required.

3. Develop procedures for:

   a. granting credit
   b. testing students
   c. completing and awarding certificates

Once subject matter committees have completed their work the high schools need to:

1. Identify the competencies to be offered. Considerations include:

   a. facility available
   b. equipment available

c. expertise of teacher
d. scope and sequence of program

2. Determine the need for program change to match competencies (to be done in conjunction with #1 above)

3. Modify courses to meet competency criteria

4. Print class roster charts and individual student certificates

5. Provide inservice activities for teachers

a. Enabling Tasks

Enabling tasks are important components of each competency. They represent a list of skills to be taught to prepare students to successfully complete the competency. They may be used as a basis for developing lesson plans.

b. Testing

Testing for determining student competency may be done as a culminating activity at the end of a program; it is recommended, however, that testing be an integral part of the program. As the student becomes competent, the student may be tested and this information should be recorded on the chart and individual student record. If a period of time elapses before the student leaves the program, student performance should be reevaluated and recorded.

c. Class Roster Chart and Individual Student Certificate

Three copies of the individual student certificate should be provided — (1) the original for the student, (2) a copy for office school records, and (3) a copy for the vocational department office. It is recommended that the original copy for the student be laminated to help preserve the certificate and to discourage the alteration of the record.

One of the most important steps in the process is followup. After students have received advanced placement or a job, the receiving institution, business or industry needs to provide the high school with the following information:

1. Ability of student to perform competencies required.

The first students from an individual instructor should be tested for competency by the post-high school, business, or industry. Once school or business personnel develop confidence in the ability of an instructor to certify student competency, only periodic testing may be administered until a change in instructor takes place.

2. Refinements in procedure needed.

3. Changes in programs to broaden student opportunities.

It is **very important** to note that the competencies in these materials are based on the needs of business and industry and not on course content and offerings of a high school or post-secondary institution. Competencies and enabling tasks should not be altered to fit courses and curriculums. They should only be altered to meet the needs of local business and industry requirements.